



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL VEHICLE AND FUEL EMISSIONS LABORATORY
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ANN ARBOR, MICHIGAN 48105-2498

OFFICE OF
AIR AND RADIATION

June 26, 2000

CCD-00-06 (LDV / LDT / SVM / ICI / LIMO)

Dear Manufacturer:

Subject: Use of SAE 5W20, GF-3 engine oil in consumer vehicles, as factory fill, and in emissions certification and fuel economy test vehicles.

EPA has received requests for approval of the use of 5W20 engine oil in emissions certification and fuel economy test vehicles, starting with the 2001 model year. The first request came in September 1999 from Ford Motor Company (Ford), and the second request came in March 2000 from American Honda Motor Co (Honda). By using 5W20 engine oil in certification and fuel economy test vehicles, these manufacturers expect to realize a fuel economy benefit relative to the engine oils that they would otherwise have used.

EPA shares with manufacturers the objective of improving the fuel economy of their products. It is of critical importance to EPA, however that vehicles used by a manufacturer in demonstrating compliance with emissions standards, and in measurements of fuel economy accurately represent the fuel economy and emissions performance of the counterpart production vehicles when these vehicles are in-use by the owner, and or operator. As a result, test vehicles are required to fully represent their production vehicle counterparts. Prior to receiving approval of the use of an oil which can improve fuel economy in its emissions certification and fuel economy test vehicles, a manufacturer must make all reasonable efforts to ensure the use of oil meeting that specification in its production vehicles when those vehicles are in their intended service.

As a result of the requests by Ford and Honda for approval of the use of 5W20 engine oil in their emissions certification and fuel economy test vehicles, a set of requirements were developed with which a manufacturer must comply in order to receive approval for the use of the subject oil. The requirements with which a manufacturer must comply in order to receive approval by EPA for the use of 5W20 GF-3 engine oil in its emissions certification and fuel economy test vehicles are as follows:

- (1) The manufacturer provides instructions in the Owner's Manual that clearly and unambiguously identify 5W20 GF-3 non-synthetic engine oil as the oil which is to be used in the vehicle's engine under ambient temperature conditions likely to be experienced during normal vehicle operation. If the Owner's Manual employs a graphical depiction of oil viscosity vs an ambient temperature range, inclusion of any qualifier word, "preferred" for example, associated



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with the oil viscosity is considered to introduce ambiguity into the instruction, and disqualifies the use of 5W20 engine oil in test vehicles. It is appropriate for a manufacturer to specify the use of a lower viscosity engine oil in extremely low ambient temperatures where a 5W20 oil may not flow adequately. If a vehicle owner wishes to use a higher priced synthetic, or partial synthetic oil, EPA does not expect a vehicle manufacturer to preclude use of such an oil provided the oil meets all vehicle manufacturer requirements.

(2) The manufacturer clearly indicates on the engine oil filler cap, by label or other permanently attached means, that 5W20 engine oil is to be used in the engine.

(3) The manufacturer provides EPA with data showing the fuel economy performance of the 5W20 engine oil to be used in emissions and fuel economy test vehicles relative to the reference oil specified in ASTM Sequence VI-B (or its replacement procedure).

(4) The manufacturer uses 5W20 engine oil as factory fill in production vehicles, and provides EPA with data showing the fuel economy performance of factory fill oil relative to the reference oil specified in ASTM Sequence VI-B (or its replacement procedure). The fuel economy performance of the oils used as factory fill and in emissions and fuel economy test vehicles must be equivalent.

(5) The manufacturer supplies its dealers with 5W20 engine oil, or otherwise secures the use of 5W20 engine oil by its dealers in customer vehicles. The fuel economy performance of the oils supplied to its dealers and as factory fill must be equivalent.

(6) The manufacturer obtains commitments from manufacturers of engine oils that they will manufacture 5W20 GF-3 engine oil in sufficient quantity to meet demand, and market 5W20 GF-3 engine oil through all of their marketing outlets, and promote the use of 5W20 GF-3 engine oils at "quick oil change" facilities. The vehicle manufacturer is to provide EPA with copies of letters that it obtains from oil manufacturers which show these commitments.

(7) The manufacturer commits to performing the following shortly after the start of the 2001 model year, or the start of the first model year for which EPA has approved use of 5W20 engine oil by the manufacturer;

(a) acquires from oil manufacturers and suppliers copies of materials that they supplied to "quick oil change" facilities pertaining to the use of 5W20 GF-3 engine oil, and to provide copies of these materials to EPA, and

(b) provides EPA with copies of materials that the manufacturer sent to its dealers pertaining to the use of 5W20 GF-3 engine oil in customer vehicles;

(8) The manufacturer commits to perform the following either approximately two years after the use of 5W20 engine oil is approved by EPA, or immediately prior to applying for certification of the 2004 model year;


(a) acquires and provides to EPA data from oil manufacturers on sales of 5W20, and on at least the two highest selling oils by viscosity grade other than 5W20, promotional information applicable to the use of 5W20 engine oil, and follow up letters of commitment for the continued promotion of 5W20 engine oil; and

(b) acquires and provides to EPA data from oil manufacturers on the fuel efficiency of the oil manufacturers' 5W20 oil (s), and at least that oil manufacturers' two highest selling oils by viscosity grade other than 5W20 as identified in (8)(a), relative to the reference oil as specified in ASTM Sequence VI-B (or its replacement procedure). Acquiring information on fuel efficiency of commercial oils can be performed in conjunction with other vehicle manufacturers; and

(c) acquires and provides to EPA data on the retail price of 5W20 oil, and at least the two highest selling oils by viscosity grade other than 5W20 as identified in (8)(a). Prices of non-synthetic, partial synthetic and synthetic oils are to be included. Acquiring information on pricing of commercial oils can be performed in conjunction with other vehicle manufacturers. (At the time of its application, the projection by Ford was that 5W20 engine oil should not be any more expensive than 5W30 engine oil (non synthetic oils)).

The information required to be provided will be used by EPA to determine whether the use of 5W20 engine oil should be approved for an individual manufacturer, and whether approval of the use of 5W20 engine oil should be extended beyond the 2003 model year.

Sincerely,

A handwritten signature in black ink, appearing to read "Gregory A. Green". The signature is fluid and cursive, with the first name "Gregory" being more prominent.

Gregory A. Green, Director
Certification and Compliance Division
Office of Transportation and Air Quality